

COMMONWEALTH OF VIRGINIA  
STATE AIR POLLUTION CONTROL BOARD  
REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION

9 VAC 5 CHAPTER 40.  
EXISTING STATIONARY SOURCES.

PART II.  
Emission Standards.

ARTICLE 12.  
Emission Standards for Chemical Fertilizer  
Manufacturing Operations (Rule 4-12).

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- 9 VAC 5-40-1640. Facility and control equipment maintenance or malfunction.
- 9 VAC 5-40-1650. Permits.

9 VAC 5-40-1520. Applicability and designation of affected facility.

A. The affected facility to which the provisions of this article apply is each chemical fertilizer manufacturing operation. For the purpose of this article, a chemical fertilizer manufacturing operation is comprised only of any combination of the following: grinders, dryers, coolers and ammoniator-granulators.

B. The provisions of this article apply throughout the Commonwealth of Virginia.

9 VAC 5-40-1530. Definitions.

A. For the purpose of these regulations and subsequent amendments or any orders issued by the board, the words or terms shall have the meaning given them in subsection C of this section.

B. As used in this article, all terms not defined here shall have the meaning

given them in 9 VAC 5 Chapter 10 (9 VAC 5-10-10 et seq.), unless otherwise required by context.

C. Terms defined.

"Chemical fertilizer" means a compound or mixture, whose chief ingredients are nitrogen, phosphorous, potassium or any combination of these ingredients, which has agronomic value.

"Manufacturing operation" means any process operation or combination of physically connected dissimilar process operations which is operated to effect physical or chemical changes, or both, in an article.

"Materials handling equipment" means any equipment used as a part of a process operation or combination of process operations which does not effect a physical or chemical change in the material or in an article, such as, but not limited to, conveyors, elevators, feeders or weighers.

"Physically connected" means any combination of process operations connected by materials handling equipment and designed for simultaneous complementary operation.

"Process operation" means any method, form, action, operation or treatment of manufacturing or processing, including any storage or handling of materials or products before, during or after manufacturing or processing.

"Process unit" means any step in a manufacturing or process operation which results in the emission of pollutants to the atmosphere.

"Process weight" means total weight of all materials introduced into any process unit which may cause any emission of pollutants. Process weight includes solid fuels charged, but does not include liquid and gaseous fuels charged or combustion air for all fuels.

"Process weight rate" means a rate established as follows:

a. For continuous or long-run steady-state process operations, the total process weight for the entire period of continuous operation or for a typical portion of it, divided by the number of hours of such period or portion of it.

b. For cyclical or batch process operations, the total weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

"Production rate" means the weight of final product obtained per hour of operation. If the rate of product going to storage can vary, the production rate shall be

determined by calculation from the feed rates of raw material.

9 VAC 5-40-1540. Standard for particulate matter.

A. No owner or other person shall cause or permit to be discharged into the atmosphere from any chemical fertilizer manufacturing operation, which utilizes recycle and physically connected dissimilar processes as a part of the manufacturing operation, any particulate emissions in excess of the limits in Table 4-12.

TABLE 4-12

Process Weight Rate Tons/Hr	Maximum Allowable Emission Rate Lb/Hr
15 or less	19.2
30	30.5
60	42.5
90	46.3
120	49.0
150	51.2
180	53.1

B. Except as provided in subsections C and D of this section, interpretation of the emission standard in subsection A of this section shall be in accordance with 9 VAC 5-40-22.

C. The process weight rate entry to be used in Table 4-12 for chemical fertilizer manufacturing operations shall be considered as the production rate, or for chemical fertilizer manufacturing operations involving physically connected dissimilar process operations shall be the sum of the process weight rates of each of the dissimilar process operations. The materials handling and screening equipment shall not be considered as a part of the process operation for the determination of process weight rate. For a process weight rate between any two consecutive rates stated in Table 4-14 maximum allowable emissions of particulate matter shall be calculated by the following equation:

1. For process weight rates up to 45 tons per hour:

$$E = 4.10 \left[ \frac{2P}{3} \right]^{0.67}$$

where:

E = emission rate in lb/hr.

P = process weight rate in tons/hr.

2. For process weight rates over 45 tons per hour:

$$E = 55.0 \left[ \frac{2P}{3} \right]^{0.11} - 40$$

where:

E = emission rate in lb/hr.

P = process weight rate in tons/hr.

D. When one manufacturing operation, or combination of physically connected process operations, is vented through separate stacks, the allowable emission rate for each stack shall be such that the sum of the emission rates for all of the stacks from that operation is equal to the allowable rates from that operation vented through a single stack.

E. For purpose of emission testing, samples taken of separate stacks within a three-day period, on the same fertilizer grade, shall be considered as simultaneous for the purpose of determining total operation emissions.

9 VAC 5-40-1550. Standard for visible emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of this chapter (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-1560. Standard for fugitive dust/emissions.

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of this chapter (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply.

9 VAC 5-40-1570. Standard for odor.

The provisions of Article 2 (9 VAC 5-40-130 et seq.) of this chapter (Emission Standards for Odor, Rule 4-2) apply.

9 VAC 5-40-1580. Standard for toxic pollutants.

The provisions of Article 3 (9 VAC 5-40-160 et seq.) of this chapter (Emission Standards for Toxic Pollutants, Rule 4-3) apply.

9 VAC 5-40-1590. Compliance.

The provisions of 9 VAC 5-40-20 (Compliance) apply.

9 VAC 5-40-1600. Test methods and procedures.

The provisions of 9 VAC 5-40-30 (Emission Testing) apply.

9 VAC 5-40-1610. Monitoring.

The provisions of 9 VAC 5-40-40 (Monitoring) apply.

9 VAC 5-40-1620. Notification, records and reporting.

The provisions of 9 VAC 5-40-50 (Notification, Records and Reporting) apply.

9 VAC 5-40-1630. Registration.

The provisions of 9 VAC 5-20-160 (Registration) apply.

9 VAC 5-40-1640. Facility and control equipment maintenance or malfunction.

The provisions of 9 VAC 5-20-180 (Facility and control equipment maintenance or malfunction) apply.

9 VAC 5-40-1650. Permits.

A permit may be required prior to beginning any of the activities specified below and the provisions of 9 VAC 5 Chapter 50 (9 VAC 5-50-10 et seq.) and 9 VAC 5 Chapter 80 (9 VAC 5-80-10 et seq.) may apply. Owners contemplating such action should contact the appropriate regional office for guidance.

1. Construction of a facility.
2. Reconstruction (replacement of more than half) of a facility.
3. Modification (any physical change to equipment) of a facility.
4. Relocation of a facility.
5. Reactivation (restart-up) of a facility.

#### HISTORICAL NOTES:

Derived from: Rule 4-12 of Part IV of VR 120-01 (§ 120-04-1201 through § 120-04-1214)

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